

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 2 of 27

Amendments to the Claims

This listing of claims will replace all prior versions (and listings) of claims without prejudice in the application.

Listing of Claims

Claims 1-19 (Canceled)

20. (Currently amended) A method [for] carried out by a framework manager to provide for collaborative planning comprising:

- (a) providing connections to a network for use ~~by at least~~ a first business entity and a second business entity, wherein the first and second business entities comprise at least one of service providers, vendors, resellers, and manufacturers;
- (b) ~~receiving information via the network using the network to receive information from at least a~~ the first business entity, including information relating to a demand of at least the first business entity for offerings;
- (c) ~~receiving information via the network using the network to receive information from at least a~~ the second business entity, including information relating to a supply of offerings from at least the second business entity;
- (d) comparing the supply and the demand for the offerings;
- (e) using the comparison of the supply and the demand for the offerings to plan future supply and demand for the offerings;
- (f) using the network to facilitate planning between at least the first business entity and the second business entity;
- (g) using the network to provide data access from multiple simultaneous data sources using a network for demand and supply planning in a network-based

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 3 of 27

supply chain having at least one service provider and at least one manufacturer;

- (h) using the network to store capacity data; and
- (i) wherein the step of storing capacity data using the network includes replication and synchronization capabilities.

21. (Presently amended) A method as recited in claim 20, further comprising:

using the network to facilitate collaborative network roll-out and planning between the ~~at least the~~ first business entity being a service provider and the ~~at least~~ second business entity being a manufacturer.

22. (Presently amended) A method as recited in claim 20, further comprising:

using the network to facilitate collaborative forecasting between ~~at least the~~ first business entity and the second business entity.

23. (Presently amended) A method as recited in claim 20 further comprising:

using the network to provide a roll-out planning tool for facilitating collaborative network roll-out and planning between ~~at least the~~ first business entity and the second business entity.

24. (Presently amended) A method as recited in claim 20, further comprising:

using the network to coordinate the supply and the demand of offerings between ~~at least the~~ first business entity and the second business entity.

25. (Presently amended) A method as recited in claim 24 further comprising:

using the network to provide a supply chain planning tool for coordinating the supply of offerings between ~~at least the~~ first business entity and the second business entity.

26. (Canceled).

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 4 of 27

27. (Presently amended) A method as recited in claim 20, further comprising:

using the network to provide a production planning tool for facilitating collaborative capacity planning between at least the first business entity and the second business entity.

28. (Presently amended) A method as recited in claim 20, wherein the business entities include at least one of a service provider and a manufacturer and further comprising:

using the network to conduct reverse inventory management between the at least one service provider and the at least one manufacturer.

29. (Previously presented) A method as recited in claim 24 further comprising:

- (a) displaying a plurality of offerings for demand and supply planning;
- (b) tailoring the display of offerings automatically by generating prices associated with the offerings based on demand for the offerings and supply of the offerings;
- (c) allowing a user to select the offerings for purchase using the network, wherein the user is one of the business entities; and
- (d) using the network to accept payment in exchange for the selected offerings.

30. (Previously presented) The method as set forth in claim 29, wherein the prices are promotional prices.

31. (Previously presented) The method as recited in claim 29, further comprising:

tailoring the display of offerings by generating prices additionally based on a geographic location of the user.

32. (Previously presented) The method as set forth in claim 29, further comprising:

storing at least one of the prices generated; and

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 5 of 27

displaying the stored price of the offerings to the user in a subsequent session, wherein the price was stored during a previous session.

33. (Previously presented) The method as set forth in claim 29 further comprising:

tailoring the display of offerings by varying an availability of the offerings based on demand for and supply of the offerings.

34. (Previously presented) The method as set forth in claim 29, wherein the offerings include at least one of a product and a service.

35. (Previously amended) A method ~~for collaborative network rollout~~ as recited in claim 20, further comprising:

- (a) using the network to allow a user to review offerings;
- (b) using the network to allow the user to select from the offerings;
- (c) using the network to prompt the user to enter user indicia;
- (d) using the network to receive the user indicia;
- (e) completing the sale and delivery of the selected offerings;
- (f) using the network to monitor the status of the selected offerings using the user indicia for demand and supply planning; and
- (g) using the network to communicate information on demand and supply planning the selected offerings to the user based on the user indicia.

36. (Previously presented) The method as set forth in claim 35, wherein the selected offerings include at least one of products and services.

37. (Previously presented) The method as set forth in claim 35, wherein the user indicia includes a user profile.

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 6 of 27

38. (Previously presented) The method as set forth in claim 37, wherein the user profile defines the at least one of products and services which the user currently at least one of possesses and purchases.

39. (Previously presented) The method as set forth in claim 38, wherein the user profile defines at least one of levels of support, support channel, methods of use of the at least one of products and services, and future purchasing plans.

40. (Previously presented) The method as set forth in claim 39 further comprising:

providing support using the support channel and at the level of support defined by the user profile.

41. (Previously presented) The method as set forth in claim 35, wherein the information is selected from the group of information including a software bug, a factory recall, and a reduced price offering.

42. (Previously presented) The method as set forth in claim 35 further comprising:

using at least one of incentives and disincentives to influence the user indicia that is entered.

43. (Previously presented) The method as set forth in claim 35 wherein the offerings are manufactured offerings.

44. (Previously presented) A method as recited in claim 24 further comprising:

- (a) using the network to manage client verification data for user authentication purposes;
- (b) using the network to provide electronic mail capabilities;
- (c) using the network to enable network browsing;
- (d) using the network to afford file transfer capabilities;
- (e) using the network to provide news reader capabilities;

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 7 of 27

- (f) using the network to afford chat room capabilities;
- (g) using the network to enable playback capabilities; and
- (h) using the network to provide financial transaction capabilities.

45. (Previously presented) A method as recited in claim 44, wherein the step of managing client verification data for user authentication purposes in a network-based supply chain includes using a user profile.

46. (Canceled).

47. (Previously presented) A method as recited in claim 27, wherein the step of providing data access from multiple simultaneous data sources using a network includes supporting database connectivity protocols.

48. (Previously presented) A method as recited in claim 27, wherein the step of providing data access from multiple simultaneous data sources using a network includes supporting data transfer in multiple languages.

49. (Previously presented) A method as recited in claim 27, wherein the step of providing data access from multiple simultaneous data sources using a network includes providing a common data access language.

50. (Previously presented) A method as recited in claim 27, wherein the step of storing capacity data using the network includes testing data integrity.

51. (Canceled).

52. (Previously presented) A method as recited in claim 28 further comprising:

- (a) using a network to collect data relating to usage and events occurring on at least one service provided by at least one service provider;
- (b) analyzing the data to determine a status of the service;
- (c) using the status of the service to predict future demand by the service provider for equipment offering supplied by a manufacturer; and

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 8 of 27

- (d) determining production capacity, inventory, costs and discounts of manufacturer offerings based on the status of the service.

53. (Presently amended) A method as recited in claim 52, wherein the events include changes to the ~~at least one~~ service.

54. (Presently amended) A method as recited in claim 52, wherein the events include capacity requests for the ~~at least one~~ service.

55. (Presently amended) A method as recited in claim 52, wherein the events include performance degradation of the ~~at least one~~ service.

56. (Presently amended) A method as recited in claim 52, further comprising the step of using the network to suggests changes to the manufacturer offerings inventory of at least one manufacturer based on the status of the ~~at least one~~ service in order to optimize supply and costs of the manufacturer offerings.

57. (Previously presented) A method recited in claim 20 for technology sharing during demand and supply planning in a network-based supply chain, comprising:

- (a) providing locator capabilities utilizing a network;
- (b) transmitting and receiving technology utilizing the network, wherein the technology includes at least one of streaming video and audio data utilizing the network;
- (c) logging events utilizing the network;
- (d) managing user profile information utilizing the network;
- (e) wherein steps (a)-(d) are carried out for demand and supply planning of the network.

58. (Previously presented) A method as recited in claim 57, wherein the step of providing locator capabilities includes searching criteria to identify and display a locator map.

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 9 of 27

59. (Previously presented) A method as recited in claim 57, wherein the step of transmitting and receiving technology includes transmitting and receiving streaming, stereo audio data.

60. (Previously presented) A method as recited in claim 57, wherein the step of transmitting and receiving technology includes an encryption capability.

61. (Previously presented) A method as recited in claim 57, wherein the step of logging events includes an event reporting capability.

62. (Previously presented) A method as recited in claim 57, wherein the step of logging events includes an event log management capability.

63. (Previously presented) A method as recited in claim 57, wherein the step of managing user profile information includes automatically receiving and storing user identity and state.

64. (Previously presented) A method as recited in claim 63, wherein the step of managing user profile information includes automatically receiving and storing user preferences and interests.

65. (Previously presented) A method as recited in claim 64, wherein the step of managing user profile information includes automatically exporting the user profile information to an active profile manager.

66. (Presently amended) A computer program embodied on a computer readable medium for a framework manager to provide for collaborative planning comprising:

- (a) logic circuit providing connections to a network for ~~use by at least~~ a first business entity and a second business entity, wherein the first and second business entities comprise at least one of service providers, vendors, resellers, and manufacturers;
- (b) logic circuit for receiving information via the network ~~using the network to receive information from at least a~~ the first business entity, including

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 10 of 27

Information relating to a demand of ~~at least~~ the first business entity for offerings;

- (c) logic circuit for receiving information via the network ~~using the network to receive information from at least a the~~ second business entity, including information relating to a supply of offerings from ~~at least~~ the second business entity;
- (d) logic circuit for comparing the supply and the demand for the offerings;
- (e) logic circuit for using the comparison of the supply and the demand for the offerings to plan future supply and demand for the offerings;
- (f) logic circuit for using the network to facilitate planning between at least the first business entity and the second business entity;
- (g) logic circuit for using the network to provide data access from multiple simultaneous data sources using a network for demand and supply planning in a network-based supply chain having at least one service provider and at least one manufacturer;
- (h) logic circuit for using the network to store capacity data; and
- (i) logic circuit wherein the step of storing capacity data using the network includes replication and synchronization capabilities.

67. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 66, further comprising:

logic circuit for using the network to facilitate collaborative network roll-out and planning between the ~~at least one~~ service provider and the ~~at least one~~ manufacturer.

68. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 67, further comprising:

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 11 of 27

code means for using the network to facilitate collaborative forecasting between at least the first business entity and the second business entity.

69. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 67 further comprising:

code means for using the network to provide a roll-out planning tool for facilitating collaborative network roll-out and planning between at least the first business entity and the second business entity.

70. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 67, further comprising:

code means for using the network to coordinate the supply and the demand of offerings between at least the first business entity and the second business entity.

71. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 70 further comprising:

code means for using the network to provide a supply chain planning tool for coordinating the supply of offerings between at least the first business entity and the second business entity.

72. (Canceled)

73. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 72, further comprising:

code means for using the network to provide a production planning tool for facilitating collaborative capacity planning between at least the first business entity and the second business entity.

74. (Presently amended) A computer program embodied on a computer readable medium as recited in claim 66, wherein the business entities include at least [on] one of a service provider and a manufacturer and further comprising:

Serial #: 09/444,739
In reply to Office action mailed: 01/27/2005
page 12 of 27

code means for using the network to conduct reverse inventory management between the ~~at least one~~ service provider and the ~~at least one~~ manufacturer.

75. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 68 further comprising:

- (a) code means for displaying a plurality of offerings for demand and supply planning;
- (b) code means for tailoring the display of offerings automatically by generating prices associated with the offerings based on demand for the offerings and supply of the offerings;
- (c) code means for allowing a user to select the offerings for purchase using the network, wherein the user is one of the business entities; and
- (d) code means for using the network to accept payment in exchange for the selected offerings.

76. (Previously presented) The computer program embodied on a computer readable medium as recited in claim 74, further comprising:

code means for tailoring the display of offerings by generating prices additionally based on a geographic location of the user.

77. (Previously presented) The computer program embodied on a computer readable medium as set forth in claim 74, further comprising:

code means for storing at least one of the prices generated; and

code means for displaying the stored price of the offerings to the user in a subsequent session, wherein the price was stored during a previous session.

78. (Previously presented) The computer program embodied on a computer readable medium as set forth in claim 74, further comprising:

code means for tailoring the display of offerings by varying an availability of the offerings based on demand for and supply of the offerings.

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 13 of 27

79. (Presently amended) A computer program embodied on a computer readable medium ~~for collaborative network rollout~~ as recited in claim 66, further comprising:

- (a) code means for using the network to allow a user to review offerings;
- (b) code means for using the network to allow the user to select from the offerings;
- (c) code means for using the network to prompt the user to enter user indicia;
- (d) code means for using the network to receive the user indicia;
- (e) code means for completing the sale and delivery of the selected offerings;
- (f) code means for using the network to monitor the status of the selected offerings using the user indicia for demand and supply planning; and
- (g) code means for using the network to communicate information on demand and supply planning the selected offerings to the user based on the user indicia.

80. (Previously presented) The computer program embodied on a computer readable medium as set forth in claim 79, wherein the user indicia includes a user profile.

81. (Previously presented) The computer program embodied on a computer readable medium as set forth in claim 80, wherein the user profile defines the at least one of products and services which the user currently at least one of possesses and purchases.

82. (Previously presented) The computer program embodied on a computer readable medium as set forth in claim 81, wherein the user profile defines at least one of levels of support, support channel, systems of use of the at least one of products and services, and future purchasing plans.

83. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 70 further comprising:

- (a) code means for using the network to manage client verification data for user authentication purposes;

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 14 of 27

- (b) code means for using the network to provide electronic mail capabilities;
- (c) code means for using the network to enable network browsing;
- (d) code means for using the network to afford file transfer capabilities;
- (e) code means for using the network to provide news reader capabilities;
- (f) code means for using the network to afford chat room capabilities;
- (g) code means for using the network to enable playback capabilities; and
- (h) code means for using the network to provide financial transaction capabilities.

84. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 83, wherein managing client verification data for user authentication purposes in a network-based supply chain includes:

code means for using a user profile.

85. (Canceled)

86. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 73, wherein the step of providing data access from multiple simultaneous data sources using a network includes supporting database connectivity protocols.

87. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 73, wherein providing data access from multiple simultaneous data sources using a network includes:

code means for supporting data transfer in multiple languages.

88. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 73, wherein the step of providing data access from multiple simultaneous data sources using a network includes providing a common data access language.

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 15 of 27

89. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 66 further comprising:

- (a) code means for using a network to collect data relating to usage and events occurring on at least one service provided by at least one service provider;
- (b) code means for analyzing the data to determine a status of the service;
- (c) code means for using the status of the service to predict future demand by the service provider for equipment offering supplied by a manufacturer; and
- (d) code means for determining production capacity, inventory, costs and discounts of manufacturer offerings based on the status of the service.

90. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 89, wherein the events include changes to the at least one service.

91. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 89, wherein the events include capacity requests for the at least one service.

92. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 89, wherein the events include performance degradation of the at least one service.

93. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 89, further comprising:

code means for using the network to suggests changes to the manufacturer offerings inventory of at least one manufacturer based on the status of the at least one service in order to optimize supply and costs of the manufacturer offerings.

94. (Previously presented) A computer program embodied on a computer readable medium recited in claim 66 for technology sharing during demand and supply planning in a network-based supply chain, comprising:

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 16 of 27

- (a) code means for providing locator capabilities utilizing a network;
- (b) code means for transmitting and receiving technology utilizing the network, wherein the technology includes at least one of streaming video and audio data utilizing the network;
- (c) code means for logging events utilizing the network;
- (d) code means for managing user profile information utilizing the network;
- (e) code means for wherein steps (a)-(d) are carried out for demand and supply planning of the network.

95. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein providing locator capabilities utilizing a network includes:

code means for searching criteria to identify and display a locator map.

96. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein transmitting and receiving technology includes:

code means for transmitting and receiving streaming, stereo audio data.

97. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein transmitting and receiving technology includes:

code means for an encryption capability.

98. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein logging events utilizing the network includes:

code means for an event reporting capability.

99. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein logging events utilizing the network includes:

code means for an event log management capability.

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 17 of 27

100. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein managing user profile information utilizing the network includes:

code means for automatically receiving and storing user identity and state.

101. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 100, wherein managing user profile information utilizing the network includes:

code means for automatically receiving and storing user preferences and interests.

102. (Previously presented) A computer program embodied on a computer readable medium as recited in claim 94, wherein managing user profile information utilizing the network includes:

code means for automatically exporting the user profile information to an active profile manager.

103. (Presently amended) A system for a framework manager to provide for collaborative planning comprising:

- (a) providing connections to a network for ~~use by at least~~ a first business entity and a second business entity, wherein the first and second business entities comprise at least one of service providers, vendors, resellers, and manufacturers;
- (b) logic circuit for receiving information via the network ~~using the network to receive information~~ from ~~at least a~~ the first business entity, including information relating to a demand of at least the first independent business entity for offerings;
- (c) logic circuit for receiving information via the network ~~using the network to receive information~~ from ~~at least a~~ the second business entity, including

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 18 of 27

Information relating to a supply of offerings from at least the second business entity;

- (d) logic circuit for comparing the supply and the demand for the offerings;
- (e) logic circuit for using the comparison of the supply and the demand for the offerings to plan future supply and demand for the offerings;
- (f) logic circuit for using the network to facilitate planning between at least the first business entity and the second business entity;
- (g) logic circuit for using the network to provide data access from multiple simultaneous data sources using a network for demand and supply planning in a network-based supply chain having at least one service provider and at least one manufacturer;
- (h) logic circuit for using the network to store capacity data; and
- (i) logic circuit wherein the step of storing capacity data using the network includes replication and synchronization capabilities.

104. (Presently amended) A system as recited in claim 103, further comprising:

logic circuit for using the network to facilitate collaborative network roll-out and planning between the ~~at least~~ one service provider and the ~~at least~~ one manufacturer.

105. (Presently amended) A system as recited in claim 103, further comprising:

logic circuit for using the network to facilitate collaborative forecasting between ~~at least~~ the first business entity and the second business entity.

106. (Presently amended) A system as recited in claim 103 further comprising:

logic circuit for using the network to provide a roll-out planning tool for facilitating collaborative network roll-out and planning between ~~at least~~ the first business entity and the second business entity.

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 19 of 27

107. (Presently amended) A system as recited in claim 103, further comprising:

logic circuit for using the network to coordinate the supply and the demand of offerings between ~~at least~~ the first business entity and the second business entity.

108. (Presently amended) A system as recited in claim 107 further comprising:

logic circuit for using the network to provide a supply chain planning tool for coordinating the supply of offerings between ~~at least~~ the first business entity and the second business entity.

109. (Presently amended) A system as recited in claim 107, further comprising:

logic circuit for using the network to facilitate planning between ~~at least~~ the first business entity and the second business entity.

110. (Presently amended) A system as recited in claim 109, further comprising:

logic circuit for using the network to provide a production planning tool for facilitating collaborative capacity planning between ~~at least~~ the first business entity and the second business entity.

111. (Presently amended) A system as recited in claim 105, wherein the business entities includes at least [on] one of a service provider and a manufacturer and further comprising:

logic circuit for using the network to conduct reverse inventory management between the ~~at least~~ one service provider and the ~~at least~~ one manufacturer.

112. (Previously presented) A system as recited in claim 105 further comprising:

- (a) logic circuit for displaying a plurality of offerings for demand and supply planning;
- (b) logic circuit for tailoring the display of offerings automatically by generating prices associated with the offerings based on demand for the offerings and supply of the offerings;

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 20 of 27

- (c) logic circuit for allowing a user to select the offerings for purchase using the network, wherein the user is one of the business entities; and
- (d) logic circuit for using the network to accept payment in exchange for the selected offerings.

113. (Previously presented) A system for collaborative network rollout as recited in claim 100, further comprising:

- (a) logic circuit for using the network to allow a user to review offerings;
- (b) logic circuit for using the network to allow the user to select from the offerings;
- (c) logic circuit for using the network to prompt the user to enter user indicia;
- (d) logic circuit for using the network to receive the user indicia;
- (e) logic circuit for completing the sale and delivery of the selected offerings;
- (f) logic circuit for using the network to monitor the status of the selected offerings using the user indicia for demand and supply planning; and
- (g) logic circuit for using the network to communicate information on demand and supply planning the selected offerings to the user based on the user indicia.

114. (Previously presented) A system as recited in claim 101 further comprising:

- (a) logic circuit for using the network to manage client verification data for user authentication purposes;
- (b) logic circuit for using the network to provide electronic mail capabilities;
- (c) logic circuit for using the network to enable network browsing;
- (d) logic circuit for using the network to afford file transfer capabilities;
- (e) logic circuit for using the network to provide news reader capabilities;

Serial #: 09/444,739

In reply to Office action mailed: 01/27/2005

page 21 of 27

- (f) logic circuit for using the network to afford chat room capabilities;
- (g) logic circuit for using the network to enable playback capabilities; and
- (h) logic circuit for using the network to provide financial transaction capabilities.

115. (Canceled)

116. (Previously presented) A system as recited in claim 103 further comprising:

- (a) logic circuit for using a network to collect data relating to usage and events occurring on at least one service provided by at least one service provider;
- (b) logic circuit for analyzing the data to determine a status of the service;
- (c) logic circuit for using the status of the service to predict future demand by the service provider for equipment offering supplied by a manufacturer; and
- (d) logic circuit for determining production capacity, inventory, costs and discounts of manufacturer offerings based on the status of the service.

117. (Previously presented) A system recited in claim 103 for technology sharing during demand and supply planning in a network-based supply chain, comprising:

- (a) logic circuit for providing locator capabilities utilizing a network;
- (b) logic circuit for transmitting and receiving technology utilizing the network, wherein the technology includes at least one of streaming video and audio data utilizing the network;
- (c) logic circuit for logging events utilizing the network;
- (d) logic circuit for managing user profile information utilizing the network;
- (e) logic circuit for wherein steps (a)-(d) are carried out for demand and supply planning of the network.